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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,234	09/07/2000	James Patrick Allen	ROC9-2000-0220-US1	1600
7590	02/08/2006		EXAMINER	
Joan Pennington 535 North Michigan Avenue Unit 1804 Chicago, IL 60611			ENGLAND, DAVID E	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/657,234	ALLEN ET AL.	
	Examiner	Art Unit	
	David E. England	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 September 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 – 4, 6, and 8 – 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 – 4, 6, and 8 – 18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

1. Claims 1 – 4, 6, and 8 – 18 are presented for examination.

Claim Objections

2. Claim 1 is objected to because of the following informalities: The limitation of, “said SAN management application for communicating”, does not seem to be correct English. Applicant is asked to change this to “is utilized for” or “communicates” or the like to overcome this minor formality. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 4, 6, 10 – 14 and 15 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kelman (6671820) in view of Stai et al. (6401128) (hereinafter Stai) in further view of Haren (6557060) in further view of Fredericks et al. (6347334) (hereinafter Fredericks).

5. Referencing claim 1, as closely interpreted by the Examiner, Kelman teaches a storage area network (SAN) management and configuration method via enabling in-band communications comprising the steps of:

6. utilizing a SAN management application for managing and configuring the storage area network, (e.g. col. 3, line 51 – col. 4, line 2);

7. said SAN management application for communicating with at least one SAN-connected host system and for communicating with a host bus adapter (HBA) device driver, (e.g. col. 6, line 64 – col. 7, line 25, “*peripheral-type*”), and

8. providing a pass through in said HBA device driver for passing communications to a designated device in the storage area network from said SAN management application including at least one topology analysis command, (e.g. col. 6, line 64 – col. 7, line 25, “*peripheral-type*”), but does not specifically teach said at least one topology analysis command including a command to get interconnect information and a command to get topology information; and

9. providing said pass through includes providing at least a transport pass through and an extended link service (ELS) pass through;

10. each of said transport pass through and said extended link service (ELS) pass through being a binary pass through, each taking applied commands and passing said commands to said designated device in the storage area network.

11. Stai teaches providing said pass through includes providing at least a transport pass through and an extended link service (ELS) pass through, (e.g. col. 6, line 33 – col. 7, line 7).

12. Haren teaches said at least one topology analysis command including a command to get interconnect information and a command to get topology information, (e.g., col. 4, lines 1 – 28).

13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Stai and Haren with Kelman because the gathering of specific analysis information could aid in the proper diagnosis of errors in the system.

14. Fredericks teaches each of said transport pass through and said extended link service (ELS) pass through being a binary pass through, each taking applied commands and passing said commands to said designated device in the storage area network, (e.g., col. 6, lines 9 – 44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Fredericks with the combine system of Kelman, Stai and Haren because allowing passage of commands ensures that proper queries of information are compatible between other neighboring nodes in the network.

15. As per claim 2, as closely interpreted by the Examiner, Kelman teaches the step of utilizing said SAN management application for communicating with a HBA device driver includes the step of providing a management application agent coupled between an end user and a storage device, (e.g. col. 1, lines 35 – 45, “*transfer agent*”), but does not specifically teach the agent coupled between the management application and said HBA device driver. Haren teaches the agent coupled between the management application and said HBA device driver, (e.g. col. 4, lines 1 – 28, “*...agent (e.g. I/O controller) ...*” & Figures 1 and 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haren with Kelman because an agent could perform management functions concerning which storage units and transmission information are within the scope or not within the scope for each node.

16. As per claim 3, as closely interpreted by the Examiner, Kelman does not specifically teach the step of utilizing said management application agent for providing predefined, fibre channel, protocol functions for communicating with said device in the storage area network. Haren teaches the step of utilizing said management application agent for providing predefined, fibre channel, protocol functions for communicating with said device in the storage area network, (e.g. col. 4, lines 1 – 28, “*...agent (e.g. I/O controller)...*”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haren with Kelman because of similar reasons as stated above.

17. As per claim 4, as closely interpreted by the Examiner, Kelman teaches as the step of providing predefined protocol functions for communicating with said device in the storage area network include the step of providing a transport protocol function, (e.g. col. 1, lines 36 – 45), but does not teach an extended link service (ELS) protocol function. Stai teaches an extended link service (ELS) protocol function, (e.g. col. 6, line 33 – col. 7, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Stai with the combine system of Kelman and Haren because it would be more efficient for a system to utilize ELS for responding to a payload translation during a public-to-private translation or private-to-public.

18. Referencing claim 6, as closely interpreted by the Examiner, Kelman teaches the step of providing said pass through in said host bus adapter (HBA) device driver through a host bus adapter (HBA) for passing communications to a device in the storage area network from said

SAN management application includes the step of providing said pass through for passing a plurality of commands, (e.g. col. 7, lines 27 – 36, “*command*” & col. 8, lines 1 – 22, “*command*”).

19. Referencing claim 10, as closely interpreted by the Examiner, Kelman teaches the step of providing said pass through for passing at least one configuration command, (e.g. col. 7, lines 27 – 36, “*command*” & col. 8, lines 1 – 22, “*command*”).

20. Claims 11 – 14, 16 and 17 are rejected for similar reasons as stated above including claims 1, 6 and 10.

21. Claims 15 and 18 are rejected for similar reasons stated above.

22. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelman Stai, Haren and Fredericks as applied to claims 1 and 11 above, and in further view of Panas et al. (6473857) (hereinafter Panas).

23. As per claim 8, as closely interpreted by the Examiner, Kelman, Stai, Haren and Fredericks do not specifically teach the step of providing said pass through for passing at least one performance analysis command. Panas teaches the step of providing said pass through for passing at least one performance analysis command, (e.g. col. 4, lines 36 – 61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine

Panas with the combine system of Kelman, Stai, Haren and Fredericks because it would be more efficient for a system to analyze the performance of a system in order to make sure that the system is running properly and when errors occur, they are easily identified and taken care of.

24. As per claim 9, as closely interpreted by the Examiner, Kelman, Stai, Haren and Fredericks do not specifically teach the step of providing said pass through for passing at least one attribute analysis command. Panas teaches the step of providing said pass through for passing at least one attribute analysis command, (e.g. col. 4, lines 36 – 61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Panas with the combine system of Kelman, Stai, Haren and Fredericks because it would be more efficient for a system to analyze the attribute to see if there are trends in the system that could lead to a efficient running system or a system with errors in it.

Response to Arguments

25. Applicant's arguments with respect to claims 1 – 4, 6, and 8 – 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

27. a. Barnett et al. U.S. Patent No. 6636981 discloses Method and system for end-to-end problem determination and fault isolation for storage area networks.

28. b. Pothapragada et al. U.S. Patent No. 6389432 discloses Intelligent virtual volume access.

29. c. McCarty U.S. Patent No. 6356944 discloses System and method for increasing write performance in a fibre channel environment.

30. d. Lagueux, Jr. et al. U.S. Patent No. 6538669 discloses Graphical user interface for configuration of a storage system.

31. e. Nolan et al. U.S. Patent No. 6640278 discloses Method for configuration and management of storage resources in a storage network.

32. f. Bouvier et al. U.S. Patent No. 6505272 discloses Intelligent backplane for serial storage architectures.

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
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